

Attorney Docket No.: WARF-0002
Inventors: Laughon, Allen S.
Serial No.: 09/810,385
Filing Date: March 16, 2001
Page 2

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-8 (canceled).

Claim 9 (new): A method for identifying compounds that directly interact with a Smad protein or a DNA-binding Smad co-repressor protein to prevent protein-protein or protein-DNA interactions required for repression of transcription from genes induced by TGF- β , activin or bone morphogenetic protein signaling in cells comprising:

(a) detecting in a cell a first level of transcription of a reporter with a promoter which is regulated by a TGF- β , activin or bone morphogenetic protein signal, wherein said cell co-expresses interacting proteins comprising a Smad protein, a DNA-binding Smad co-repressor protein and a CtBP protein;

(b) contacting said cell with a test compound;

(c) detecting a second level of transcription of the reporter in the cell after addition of the test compound; and

(d) comparing the first level with the second level, wherein a decrease in the level of repression of transcription of the reporter in said cell after addition of the test compound is indicative of the ability of the test compound to interfere with transcriptional repression of genes induced by a TGF- β , activin or bone morphogenetic protein signal in cells.

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Page 3

Claim 10 (new): The method of claim 9 wherein transcription levels of the reporter both before and after addition of the test compound are detected in cells expressing a Smad protein, a CtBP protein, and a DNA-binding Smad co-repressor protein selected from the group consisting of Evi-1, TGIF, SIP1, and Schnurri.

Claim 11 (new): The method of claim 9 wherein the Smad protein is *Drosophila* Mad or Medea.

Claim 12 (new): The method of claim 9 wherein the CtBP protein is dCtBP or CtBP2.